Figure 6.2 Relationship between Control Panel Gauges and Best Practices

Control Panel Gauges (columns):
G1 = General Application-No Gauge Impact; G2 = Defects by Activity; G3 = Warnings; G4 = Risk Liability; G5 = Risk Impact; G6 = Overtime Hours; G7 = Voluntary Turnover; G8 = Aggregate Requirements Growth; G9 = Quality Gates Progress; G10 = Tasks; G11 = "Abba Chart"; G12 = TCPI; G13 = CPI; G14 = Cumulative Dollars; G15 = Cumulative Months; G16 = Cumulative Earned Value Delivered

Best Practices	G1	G2	G3	G4	G5	G6	G7	G8	G9	G10	G11	G12	G13	G14	G15	G16
Risk Management																
Establish Management Reserves for Risk Resolution				X	X											
Implement Metrics-based Risk Decisions				X	X											
Perform Continuous Risk Management				X	X											
Formalize Risk Tracking and Review				X	X											
Manage Impact of External Dependencies				X	X				X							
Planning																
Quantitative Software Estimation/Verification									X		X	X	X	X	X	X
Joint Team Involvement								X								
Activity Planning										X				X	X	
Data Requirements								X								
Program Visibility																
Practical Project-Oriented Software Measurement Process						X	X				X	X	X		X	X
Issue-Driven Measures		X				X	X			X	X	X	X		X	
Internal Engineering Analysis Process							X			X						
Effective Communication Structure			X			X	X									
Program Control																
Test Methodology		X														
Regression Testing		X														
Computer-Aided Software Testing		X														
Error Source Location		X														
Independent Verification and Validation (IV&V)	X										X		X			X
Quality Gate Completion Criteria				X							X		X			
Configuration Management Coverage	X															
Requirements Change Management	X															
Baseline Methodology	X															
Technical Quality Assurance		X														
Engineering Practices and Culture																
Include User in a Multi-Disciplined Requirements Support Team								X								
Encourage Compatible Analyses and Design Methods								X								
Encourage Software Architecture Definition and Maintenance								X								
Encourage Requirements Engineering Process that Includes								X								
Use of Prototypes, Models and Simulations	X															
Encourage Proactive Change Impact Analysis	X															
Plan for Domain Engineering in Acquisitions	X															
Encourage Use of Clean Room Techniques	X															
Enterprise Practices Tailored to Projects	X															
Encourage Use of Software Development Standards such as MIL-STD-498	X															
Assessing Organizational Effectiveness	X															
Process Improvement																
Identifying and Fostering Sponsorship	X															
Establishing/Maintaining the Framework for Progress Improvement	X															
Assessing/Reassessing an Organization's Process Quality	X															
Developing a Software Process Improvement Plan	X															
Institutionalizing the Software Process Improvement Plan	X															
Closing the Loop for Software Process Improvement	X															
Solicitation and Contracting																
Management of COTS, Reuse and Emerging Technologies	X															
Employ a Customer/Contractor Integrated Project Team	X	X														
Use of Periodic Demos	X	X														
Utilize Software Development Capability Evaluation (SDCE)	X															